Simple chemical reactions

1. Minah was given a container with Substance X in it.



In addition, she was given three other empty containers Q, R and S and a syringe.



(a) How could she show that substance X has no definite shape?

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(b) How could she show that substance X has no definite volume?

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1. Complete the following classification diagram using the words in the box.

|  |  |  |
| --- | --- | --- |
| **solid** | **hydrogen** | **oxygen** |
| **liquid** | **syrup** | **hair** |



1. An experiment is set up as shown below. A needle is then pricked into balloon B, bursting it.



a) What will you observe about the balance?

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b) What does this experiment show?



(a) Container A is filled with stones. What are the states of matter in Container A?

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(b) Container B is filled with water. When the contents of Container B are poured up to the brim of Container A, what are the states of matter in Container A now?

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1. Mrs Lee gave Allan two identical deflated balloons, attached with strings of equal length. He filled balloon A with gas X and balloon B with gas Y. Both balloons contained the same amount of gas.



(a) Explain why Balloon A floats at a higher level than Balloon B.

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1. **A** cannot be compressed. However, when it is heated, it will change its state to **B**. **B** takes up the shape of the container. Further heating will cause **B**to change its state to **C** and **C** and be compressed.

a) What states do **A**, **B** and **C** represent?

A:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

B:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

C:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

b) What could be done in order to change the sate of B back to A? Explain your answer.

Ans:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. What is meant by the term Brownian motion and diffusion
2. Write the procedure for the pop test
3. Why does the lime water turn milky when you blow into it?
4. State a few examples under reversible and irreversible changes